

SHORT COMMUNICATION

Two new records of the myrmecophile spider *Thyreosthenius biovatus* Cambridge in nests of *Formica rufa* L. On 27 September 1997, while looking for the "guest ant" *Formicoxenus nitidulus* Nylander in nests of the red wood ant *Formica rufa* L. (Robinson, 1998) at Gait Barrows National Nature Reserve, Lancashire (VC 60, SD483775), on one nest I noticed very small (c. 2 mm.) "money spiders", which were being ignored by the *F. rufa* workers, whose red-brown and leaden-grey colouring they rather resembled. They were identified by Dr Jennifer Newton as the myrmecophile spider *Thyreosthenius biovatus* Cambridge. On 29 September she took a male and female at the same nest and the identification has been confirmed by Chris Felton at Liverpool Museum, where these specimens are now lodged. On 21 October I found male and female (det. J. M. Newton) on one nest on Arnside Knott, Cumbria (VC 69, SD455775).

This spider was first found in Britain by Donisthorpe in a *F. rufa* nest near Hastings in 1900. He studied them in observation nests of *F. rufa*, where on one occasion he saw one eating a small fly, and the workers never molested them (Donisthorpe, 1927). Bristowe (1958) suggests that the three Linyphiids which have adopted life in ants nests as a speciality have abandoned web-making entirely in the ant galleries and merely pounce on the little flies and Collembola which he had seen them eating. It seems that, like *F. nitidulus*, they are "uninvited lodgers" which neither harm their hosts nor are harmed by them, but unlike the ant they are occasionally found free-living outside ant nests (Roberts, 1987). Although Donisthorpe states: "I personally found both sexes of this spider in every *rufa* nest I examined, from the Highlands to the South Coast of England, and in every month of the year", it has seldom been recorded in the north of England. There is apparently a very old record without details for Cumberland, and the only detailed records (for Yorkshire) are for 1937 or earlier, so the specimens from Gait Barrows and Arnside Knott appear to be the first records for West Lancashire (VC 60) and Westmorland (VC 69) respectively, and the first substantiated records for 60 years in the north of England.—NEIL A. ROBINSON, 3 Abbey Drive, Natland, Kendal, Cumbria LA9 7QN.

REFERENCES

- Bristowe, W. S. 1958. *The World of Spiders*. Collins, New Naturalist.
 Donisthorpe, H. St. J. K. 1927. *Guests of British Ants: their habits and life-histories*. Routledge.
 Roberts, M. J. 1987. *The Spiders of Great Britain and Ireland*. Vol. II. Harley Books, Colchester.
 Robinson, N. A. 1998. Observations on the "guest ant" *Formicoxenus nitidulus* Nylander in nests of the red wood ant *Formica rufa* L. in 1997. *Br. J. Ent. Nat. Hist.* **11**: 125–128.

Plate IV legends

- Fig. 1. *Odynerus spinipes* 'chimneys'. (see Uffen, p.71).
 Fig. 2. *O. spinipes* placing wet mud pellet on 'chimney' of nest.
 Fig. 3. *O. spinipes* watching three *Lasius niger* stealing weevil larvae from nest.
 Fig. 4. *Lasius niger* with weevil larvae stolen from *O. spinipes* and being taken into their nest.

Delias alberti tetamba (see Tennent, p. 69)

- Fig. 5. (left top row) Male, Solomon Islands, Guadalcanal, Mount Popomanaseu, summit and summit ridge. 2200–2330 m, 30.vii.1996, W. J. Tennent, Imperial College Solomon Islands Expedition 1996 (NHM).
 Fig. 6. (right top row) Male underside, same data (NHM).
 Fig. 7. (left bottom row) Female, 28.vii.1996 (NHM).
 Fig. 8. (right bottom row) Female underside, 29.vii.1996 (NHM).